CONSTRUCTION OF PLAYING ABILITY TEST FOR SPECIFIC POSITION IN BASKETBALL

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SYNOPSIS

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CHAPTER I

INTRODUCTION

According to Bunn (1964), basketball is one of the most popular sports in the world, both as a spectator sport and in terms of player participation. Basketball is one of the most popular and widely played sports in the world. In 1891, James Naismith, a physical education teacher at Christine Young International School, introduced the game of basketball. The way basketball is played today has changed a lot, including the equipment. Wooden (1966) stated that a good knowledge and the ability to correctly implement the various fundamentals of the game are essential for successful play. Bykerk (1979) states that the game of basketball is a science and, like all sciences, is predictable. In other words, it is possible to predict the course of the game. Only if the execution is not consistent do the results differ.

Fox (1988) stated that footwork, dribbling, passing and receiving, shooting and rebounding are important, fundamental individual skills that each player must master to improve team effectiveness. Footwork and body balance are the foundations of sportsmanship (Lokesh Thani, 1995). Balance means having control of your body so that you can complete any movement without additional adjustments. Balance is a key factor in increasing speed of movement. Speed and balance are closely related to footwork, which is the basis of all basic skills (Brittenham, 1996). Aptitude tests were designed to assess the basic skills required in a specific sports discipline (AAHPERD, 1968). The items that make up the teaching staff examinations are collectively referred to as “test suites”. A skill test helps an individual assess their proficiency in the basic skills of the game and encourages them to improve. In the game of basketball, Brace made the first attempt to measure fundamental skills in 1924. Edgren (1932) was the first to propose an experiment based on statistical analysis. Several experiments have been conducted on skill in basketball (Johnson 1934, Young and Moser 1934, Schwartz 1937, Geltz 1939, Knoz 1947, Lehsten 1948, Leilich 1952, Miller 1954, Barrow 1959, Harrison 1969, Antrim 1975, Hopkins, Shick, and Plack 1984). According to McCall (1939), things on Earth exist in large quantities and are measurable. Unlike other major sports, basketball has its roots in the United States. Its origins do not date back to antiquity, like most other sports. Although popular worldwide, basketball was invented over a hundred years ago (1891) in Springfield, Massachusetts, by a young physical education teacher, Dr. James Naismith. The modern era is characterized by progress in all fields and has achieved many remarkable things through various kinds of scientific research and advancements.

The science of sports performance is playing an increasingly important role in the scientific observation and training of athletes, utilizing cutting-edge tools to achieve better performance. Today, coaches and trainers around the world face enormous challenges in approaching the

problem scientifically and providing their athletes with accurate and progressive training instructions based on scientific methods that lead to the desired results.

The science of physics and physiology is considered one of the best methods for monitoring athletic performance in various fields and is becoming increasingly important. (Harrison Clark, 1987)

STATEMENT OF THE PROBLEM

The purpose of this study is to develop a series of basketball skills test battery for senior boys.

DELIMITATION

1. The study focuses on college basketball players aged 18 to 25 years.
2. The study involved basketball players from universities and states in northern India (Uttar Pradesh, Delhi, Chandigarh, MP, Uttarakhand) who participated in intercollegiate competitions and state championships organized by their respective universities and state basketball federations.
3. The study also focuses on skills that contribute to the overall performance of basketball players.

LIMITATION

1. The study was limited to basketball skills, and their physical qualities were not considered limitations.
2. The study was conducted without any testing and stimulus techniques.
3. Basketball players selected by various coaches were trained and prepared in various ways to improve their performance. This was beyond the researcher's control and therefore represents a limitation of the study.
4. The study's limitations also included the players' psychological state and education level, as well as the influence of media (television, CDs, and videotapes).

OBJECTIVE OF THE STUDY

The study's objectives are:

1. Select the tasks for the basketball skill test.
2. Select different experiments for each selected item.
3. Design an experiment on the ability to shoot a basketball.
4. Design a test to assess the ability to pass a basketball.
5. Design an experiment on the art of dribbling in basketball.

HYPOTHESIS

It is hypothesized that,

1. The newly created skill test may be reliable.
2. The newly created skill test may be valid.
3. The newly created skill test could be objective.

DEFINITION AND EXPLANATION OF TERM

Skill

Competence is the degree of proficiency in a specific task or a defined group of tasks. (Fleissmann, 1964)

Test

A test is a specific instrument, procedure, or technique used to elicit responses from students, thereby obtaining information that serves as a basis for assessing the quality or quantity of things, such as skills, abilities, knowledge, and values. (Harold M. Barrow and Rosemary McGee)

A test is generally defined as a means or measure used to obtain information about a specific property or characteristic of an individual or group. (D. Allen Philips and James E. Hornak)

Measurement

Measurements facilitate the process of assessment because a variety of tools and techniques are used to collect data (Johnson and Nelson, 1988).

Evaluation

Evaluation goes beyond simple measurement, as subjective judgments are based on the data collected through the measurement process (Johnson and Nelson, 1988).

Reliability

Reliability is the degree to which a test consistently measures a particular factor. This does not mean that the factor is necessarily what the test or other measurement instrument is designed to measure. This means that even though a test may be reliable, it is not valid in the sense that it measures what it claims to measure (Bosco and Gustafson, 1983).

Validity

Validity is an assessment of how well a test measures the factor for which it was designed (Bosco and Gustafson, 1983).

Objectivity

Objectivity is similar to reliability, but it refers to the consistency of agreement between ratings of the quality or accuracy of a performance. This means that scores given by different examiners administering the same test to a group of subjects will produce high reliability coefficients (Bosco and Gustafson, 1983).

Norms

Johnson and Nelson state: "Norms are values that are considered representative for a given population. A test with defined norms is much more effective than a test without norms. Norms are usually based on age, educational level, height, weight, or a combination of these characteristics."

This is the only point of reference that can be the basis for assessment. "It is used by educators and researchers because the measurement process involves comparison" (Charles E. Willgoose).

"A norm, along with test scores, is the average or typical score on a test (or other measure) for members of a group. "Norms are often presented in tables that show typical scores for several homogeneous groups, such as students in a given class or age group." (Robert L. Ebel).

Passing

A pass is a quick movement from one side of the court to the other. This means that the ball must be thrown to an open teammate. As a fundamental skill, it is important that the player is not as high as the other players (Thani, 1995). Throwing the ball is essential for maintaining possession of the ball and reaching the spot where the goal will be scored (Brown, 1994).

Shooting

The primary goal of basketball is to score points. The goal is to shoot. Shooting is the ability of a player to score points by shooting the ball at an appropriate angle. The effectiveness of a shot is determined by the approach to the target, the position and grip of the ball, the line of the shot, the movement of the shot, and the arc (Palanisamy, 1974). The throw is a helical movement that extends from the feet to the ground until the moment of release: a continuous and fluid action that, ideally, extends from the feet to the ground, from the release with the hand to the trajectory of the ball into the basket (Whelton, 1988). It is the art of shooting. It is one of the most artistic movements. The force of the shot comes from the ground. The exercise is performed rhythmically and gently upwards through the toes, ankles, bending of the knees and hips, as well as through the arm, palm and fingers, until the tension is released (Whelton, 1988).

Dribbling

Dribbling is one of the most unique movements in basketball. It allows the ball to be moved from one place to another. Dribbling advances the ball down the court, directs it toward the basket, and improves the passing angle to a teammate. When dribbling, the player who touches the ball first tends to pass it, as this can reveal their natural individuality (Laurentius and Saibene, 1946).

Dribbling involves moving the arms from the shoulder, elbow, wrist, and fingers. While dribbling, the fingers remain comfortably extended and relaxed. The ball is pressed with the fingers, and the hand is slightly concave to prevent the ball from being hit. The hand must remain raised, and the player must not look at the ball while dribbling. The higher the dribble, the more the shoulders and elbows are used. The lower the dribble, the more the wrist and fingers are used to control the ball (Fox, 1978).

SIGNIFICANCE OF THE STUDY

Due to the understanding of the need and importance of objective skill assessment in educational institutions and other sports organizations, these topics are considered important for this study.

1. It may be useful to measure a player's specific skill level in the game of basketball.
2. This could prove to be a powerful tool for researchers to evaluate basketball players more objectively.

3. The goal of scientific basketball training may be to place greater emphasis on the skills that truly contribute to building a winning team.
4. The goal of selecting talented basketball players for teams at the college, district, state, and even national levels may be beneficial.
5. The goal could be to serve on the selection committee for state teams, university teams, or even to participate in the selection of professional basketball players in private and public institutions.
6. Further research could be useful in identifying the strengths and weaknesses of basketball players and designing separate training areas to improve their technical skills. (Purpose of the assessment).
7. Further research could be useful in establishing standards for female players.
8. In the hands of basketball champions, this can be a diagnostic tool.
9. It could play a key role in the selection of major league basketball players to host games.
10. The magazine can serve as a manual for basketball coaches and experts working in educational institutions, clubs, and other private companies.
11. Perhaps the best way to select and evaluate talented players at any level is to conduct a series of objective tests to accurately analyze and classify players at various levels in men's and women's football.

CHAPTER II
REVIEW OF RELATED LITERATURE

LITERATURE ON ATHLETIC SKILL TEST

Inbarajan (1997) conducted a study on standard setting in selected sporting events, namely, 100 m, 1500 m, long jump, and shot put, for athletic students of colleges in Tamil Nadu. Three hundred and eighty-one male students were selected from various athletic colleges in Tamil Nadu, and physical education students were chosen as subjects. The data collected from 381 individuals were statistically analyzed, using mean and standard deviation. The raw value is converted into a keel scale value. In the 100 meter race, based on the qualitative evaluation of the set standards, 58 subjects were very poor, 72 subjects were average, 117 subjects were mediocre, 71 subjects were good, 58 subjects were very good, and 5 subjects were excellent. In the longitudinal analysis, based on the qualitative assessment of the established criteria, 45 subjects obtained poor results, 113 average results, 103 average results, 58 good results, 46 excellent results, and 16 excellent results. In the group sample, of 381 participants, 62 were poor, 112 average, 95 average, 35 good, 50 excellent, and 27 excellent.

Jackson et al. (1992) attempted to evaluate the reliability and validity of the 1.6-kilometer walk as a field test of aerobic fitness and to develop standards for this test. To determine this reliability and validity, the samples included 41 men (n = 21) and women (n = 20) between the ages of 19 and 32. The subjects completed a bicycle exercise test to determine maximal oxygen uptake and completed three attempts at maximal 1.6-kilometer walks on an indoor track. The mean test function was used for statistical analysis. The alpha reliability estimate is 0.96, but the trend is significant. Experiments 2 and 3 had a reliability estimate of 0.95, with no observed bias. The oxygen consumption between the third experiment and peak is 0.57. When the Rock Port prediction function was used, with age, weight, sex, mile time, and final heart rate included in the calculations to predict peak O2, the r value increased to 0.66. The non-Indigenous samples included men (n = 400) and women (n = 426) ranging in age from eighteen to thirty. They completed a one-mile walking exercise and then took a performance test. Percentile norms are then created.

LITERATURE ON BADMINTON SKILL TEST

Jayavel (2006) developed a skill test for high ball toss and straight arm hit in badminton and then established standards for these skills to assess the talent of male college badminton players aged 18 to 25 years in the state of Tamil Nadu. Data collected from one thousand subjects were statistically analyzed. The mean, standard deviation and Hull scale were calculated. The collected raw scores were converted to Hull scale and norms for the new aptitude tests were created. One hundred and twenty intercollegiate badminton players were randomly selected and after performing the most appropriate tests, data were collected from the subjects on consecutive days and under similar conditions. Pearson product correlation statistical method was used to confirm the validity and objectivity. Using an r value of 0.99 or more on the arbitrary test items, the most appropriate test items were selected: high shot lobes covering the entire area near the baseline, high shot lobes near the midline and baseline for one-handed shots, five-zone front shots, and four-zone front shots. The validity r value between the criterion test and the newly constructed tests ranged from 0.981 to 0.988 and the objectivity value ranged from 0.987 to 0.992. The reliability coefficient of the best-fit test items ranged from 0.9952 to 0.9995.

Sharma (1987) developed and standardized a specific skill test for badminton players. Factor analysis method was used on a data set of 100 intercollegiate/regional badminton players from North India. Up to seven specific fitness factors were obtained, five of which were evaluated to select the significant test items for each factor. The item with the highest loading for each factor was included in the test set. The test results thus obtained were administered to five hundred badminton players to develop the standards. The rules are represented as percentages accompanied by T-scores. The five factors selected were core strength, flexibility, badminton agility, endurance, and explosive power of arms and legs. The test items selected for this specific endurance test for badminton players were abdominal exercises, agility on the court, trunk flexion, six-corner endurance, and softball throwing. The technique of factor analysis was used to select the test items from twenty variables.

Lockhart and McPherson (in 1949) designed a badminton skill test to measure playing ability. The validity of the test was determined by correlating the total scores of three expert judges with the badminton playing ability of sixty-eight girls on a one-to-ten point scale. The resulting

correlation coefficient is 0.71 ± 0.06. Additionally, the competition is conducted in the form of a round-robin tournament with twenty-seven players. The percentage of games won was correlated with each point scored by the players in the badminton-volleyball test. The resulting correlation is 0.60 ± 0.12. The third validation is calculated by correlating the judges' ratings with the percentage of games won by each player in the round-robin competition. The resulting correlation is 0.90 ± 0.03. Using the test-retest method to determine reliability, a correlation of 0.90 is obtained when the test is administered twice to fifty players over a period of three days.

In 1949, the French designed a badminton test for female students and retested it with Stalker. It consists of two elements: the performance test and the clarity test. Reliability coefficients ranging from 0.77 to 0.98 are obtained. For validity, a preliminary study reported a correlation of 0.85 between experience and a combination of subjective ratings and conflict classifications.

LITERATURE ON BADMINTON SKILL TEST

Thomas (2003) completed a study on the construction and standardization of a battery of ability tests for young basketball players. Two hundred male basketball players from Kerala, aged fourteen to seventeen, were selected as study participants. The following ten items were proposed for data collection: shooting accuracy, shooting speed, inside-court shots within 60 seconds, outside-court shots, forward shots, free throws, backward dribbling, maze dribbling, side-slipping, and penalty-area sliding. Data from all items were processed using Pearson's product-moment correlation method to test their reliability, objectivity, and validity. According to statistical analysis, 50% of the test questions were removed from the originally proposed test battery, and five more important questions demonstrated higher validity, reliability, and objectivity. Test item reliability was estimated for passing speed (0.87), jump shot (0.78), jump shot (0.94), labyrinth dribbling (0.84), and lateral sliding (0.80). The validity of the test items was 0.94, 0.59, 0.97, 0.68, 0.88, and the objectivity of the items was 0.89, 0.85, 0.95, 0.84, and 0.84, respectively. The Hull percentile scale and norms have also been developed as assessment tools for ranking and classifying basketball players.

Palani Swamy (2001) conducted a study on the topic of "Developing a Basketball Skills Test for Students Aged 20 to 25." The study was conducted in three phases: selecting random elements, extracting the most appropriate test, defining the final set of elements, and

establishing rules for the final set of elements. In Phase I, twenty random trials using different techniques were selected, and the most appropriate trial was chosen using a two-factor repeated-measures ANDVA design. Subsequently, in Phase II, the test criterion was compared to the most appropriate elements using product and significance correlation. Security, objectivity, and subjectivity were established for new elements such as kinetic and fast throws (throws and catches), long throws, zigzag and transition throws (throws), transition dribbling and fast dribbling (dribbles), excellent defensive movements in confined spaces, stopping and turning, and mixing (footwork and push-off).

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Maria (1994) completed a study on the development of basketball skill rules for female college basketball players. For this purpose, 384 individuals from 32 colleges at six universities in Tamandou were randomly selected. The following variables were selected for this study: shooting test, shooting accuracy, and dribbling test. The statistical methods used in this study were mean, standard deviation, and the Hull scale. According to the qualitative evaluation of the standards established in shooting sports, 22 players were considered poor, 96 were considered good, and 17 were considered excellent. In terms of shooting accuracy, 76 players were rated poor, 64 good, and 23 excellent. In the dribbling test, 72 players were rated poor, 65 good, and 13 excellent.

Williams (1984) examined the relationship between certain physical characteristics such as speed, agility, jumping ability, shooting accuracy, agility, height, and weight, and the game performance of fifty male college basketball players. Game statistics were collected for each subject. Using these statistics, the statistical performance of the video games was calculated for each subject. The simultaneous solution and progressive inclusion techniques of multiple regression analysis were applied to the raw data. Individual and group correlations were determined to assess the relationship between physical characteristics (independent variables) and the statistical characteristics of speed, agility, jumping ability, shooting accuracy, height, and weight. Only shooting accuracy showed a significant correlation (0.05 level) with the statistical effect of basketball players.
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Hachn (1980) investigated the Knox Basketball Sports Test as a predictive measure of general basketball ability in high school female players. Four questions from the Knox Basketball Test program were administered to 198 girls from nine MOSHSS schools during basketball tryouts and before they were cut from the team.

Umfress (1978) investigated the reliability and validity of a battery of basketball skills tests for female students in grades nine through twelve (N = 174). She completed a series of basketball skills tests during a twenty-one-week summer camp. Reliability coefficients (23) were determined using one-way ANOVA: shooting (0.78), wall climbing (0.76), obstacle dropping (0.86), and sliding down a hill (0.30). Correlations among the tests in the battery are low. A team of five military experts compiled assessment sheets for each skill in the areas of shooting, dribbling, defensive movement, and shooting. Kendall's coefficient of agreement was used to determine reliability among individuals with disabilities, which was 0.81 for the first week of camp and 0.69 for the second week. Spearman's Rho validity coefficient was 0.69.

Antrim (1975) conducted a continuous experiment with 26 female students in a beginner's basketball class. The test included three phases: dribbling, shooting and rebounding, and shooting and catching the ball. He used the judges' ratings as the criterion and found that the duration of the entire test was more closely linked to the criterion than to individual parts. The agreement between the estimators was 0.87. A validity coefficient of 0.74 was found when the players' ratings were correlated over the entire testing period. Reliability can be assessed in several ways, but it is highest when two practice tests precede the exam and two tests are administered and added together the following day. Under these conditions, the reliability coefficient is estimated at 0.82.

Williams (1974) attempted to develop a test to assess basketball playing ability and examine its validity, reliability, and objectivity. To develop the assessment tool, an experimental study was conducted on two groups of students at Baldwin-Walh College. Subjective analysis of the game and a review of relevant literature led to the identification of three components that represent success factors for players: anaerobic strength, hand-eye coordination, and agility. Between 1971 and 1972, seven tests in these regions were administered to 44 basketball-loving students, who were divided into subgroups of 25 candidates and 19 non-candidates, based on their individual decisions about college basketball candidates. Biserial correlations are used to determine the validity coefficients for each test, and the strongest coefficients in each domain

form the final table. Selected measures include jumping strength and distance, anaerobic power, 30-second field impact, hand-eye coordination, four-way boomerang, and agility. The total battery score is calculated by transforming the Hull scale and yields a validity coefficient of 0.915. Objectivity and reliability are investigated in the final experimental phase with 44 men who attended compulsory physical education classes during the 1972 term, using product-moment correlation techniques. Two evaluators assessed the results of each event separately to obtain data that produced an objectivity coefficient of 0.994 for all values in the battery. A reliability coefficient of 0.896 was calculated for the test matrix after examining 38 subjects two weeks later. Dahi (1973) investigated the relationship between the ability to make a jump shot and certain selected measurable characteristics. College basketball players (N=24) were examined on eleven independent variables and three criterion variables: 3.0-meter accuracy, 6.4-meter accuracy, and overall accuracy. Wrist strength and flexibility were significantly correlated with 3-meter accuracy. Wrist strength, hand size, and hand reaction were significantly correlated with 6.4-meter accuracy. He concluded that the ability to jump from 3 to 6 meters could be predicted using a developed regression equation.

Dahi (1973) studied the relationship between student ability and the cane and all attributes that are mismatched. College football players (N=24) also had values based on an individual variable and three criterion variables: 3-meter accuracy, 6.4-meter accuracy, and comparison accuracy. Strength and flexibility were also significantly correlated with 3-meter accuracy. Arm power, hand size, and response were significantly correlated with 6.4-meter accuracy. Conclusion: The ability of the student to perform a 3-meter somersault up to a maximum of 6.4 meters can be observed before starting a moving regression equation.

In his study, Childress (1972) attempted to identify and determine the effectiveness of certain variables before beginning the stakeholder analysis of the discriminant analysis. If you select the dominant vein type, you should consider revising the lettering relevant to the validity of the skill elements in classical dance classes at a higher level. The test elements also contain a high school student, and the results resulting from the analytical analysis are used in the analytical format. These include significant and strong musculoskeletal agility, muscle strength relative to overall speed, speed of ballet execution, pure muscle strength, total body movement tempo, and manual relaxation. It is currently being performed due to the opera series: the first is composed of six elements and the second of ten. The result of this Hanno studio has demonstrated that the elements of ballet skill can be examined, taken into account, and used to

construct an assessment system that will differentiate performers based on the population characterized by their success.

Strain (1970) has a condotto a studio to preserve the future performances of high school football players, the state implemented a stimulation of the production of victory in the varsity game starting from the fasi di game di game dei single students nel secondo anno. From 1961 to 1968, sophomores and seniors on the varsity team at Rapid City High School, the sophomore, junior, and senior years, completed for the first time in the form of three pre-written readings based on the relationship between the individual playing styles of the sophomores and the point production of the varsity team. In the multiple regression equation, five predictor variables (the first number of shots released per game, the percentage of field goals, and the percentage of rim shots) correlate with successive variations in the point production of the varsity team during the month.

CHAPTER III
METHODOLOGY

SELECTION OF THE SUBJECT

Three hundred male basketball players from various colleges, clubs and associations in North India were selected for this study.

SELECTION OF TEST ITEMS

Considering the various important elements of the game that should be measured for the assessment and analysis of game skills, the researchers selected several elements.

DESIGN OF THE TEST BATTERY

Preliminary Test Package (PTP)

Test battery divide into 2 parts

Part-I: For point guard, shooting guard, small forward

1. **Passing**
   - A. Wall pass with sideward shuffling
   - B. Overhead pass
   - C. One Hand sidearm bounce pass
   - D. Baseball pass
2. **Dribbling**
   - A. Forward Backward and Lateral Shuttle Dribble Test
   - B. Star dibbling test
   - C. Zig zag dribble test
   - D. Speed dribble test
3. **Shooting**
   - A. 6 corner full court shooting (how many baskets is converted in 1 min)
   - B. Inside outside circle shooting (start from midrange to 3 pointer line, player attempt and collect self-rebound after missing the basket; 1 point under the basket, 2-point mid-range, 3 points from 3 pointer line)
   - C. Shooting endurance
   - D. Figure of eight layup shoot (five cones should be placed in five different positions at a distance of 15 feet from the centre)
   - E. Start shooting test (how many baskets is converted in 1 min)

For post player and power forward

Passing and dribbling test battery are same as point guard, shooting guard, small forward

1. Hook shot
2. Board taps and shoot (from both sides of rim)
3. Inside outside shooting circle (3 and 2 pointer)
4. Shooting endurance (3pointer)
5. Start shooting test (how many baskets is converted in 1 min)

TESTER COMPETENCY

Although the researcher has extensive experience conducting experimental procedures with human subjects, he is supported by experienced physical education teachers. Each examiner will be informed of the procedure for conducting and evaluating the selected examination subjects. Proficiency is demonstrated in the form of inter-rater reliability coefficients based on the correlation between success and failure of tests administered to the same subjects by three different examiners. Examiner ability was calculated using Safrit and Wood's (1989) two-way ANOVA model. Correlation coefficients for listener ability ranged from 0.876 to 0.982, a value considered very high for the purposes of this study.

INSTRUMENT RELIABILITY

The measurements and time points used to recruit subjects were obtained from reputable companies and are used for research purposes. Furthermore, these instruments are calibrated in SI units. To determine the reliability of the instruments, measurements are taken five times on each subject using the same instrument under similar conditions. The scores obtained were the same and were also compared to other media-reported scores for other well-known companies. Since the items were the same, the instrument was considered reliable and accurate for the purposes of the study.

SUBJECT RELIABILITY

To determine the subjects' confidence level, 30 subjects were randomly selected. The examiner examined and recorded the subjects twice under similar conditions. These tests were repeated over the next few days. To determine within-subject reliability, a two-way ANOVA model was

used, as described by Safrit and Wood (1989). The estimated reliability coefficients, i.e., the "R" values for the items tested, ranged from 0.875 to 0.950, a value considered high for the purposes of this study.

ADMINISTERATER OF TEST ITEMS

The purpose and significance of the study were explained to the participants to ensure maximum cooperation. Before the test, the subjects were asked to warm up sufficiently. Each skill was demonstrated with a corresponding explanation. Test takers may only practice each test item once. Necessary safety precautions will be taken throughout the survey. The assessment method is explained before answering the actual exam questions. Details and procedures for assigning the Preliminary Test Package (PTP) for the leader, fullback, power forward, power forward, and post positions can be found here:

Passing

Moving Pass

Purpose: To test the individual's ability to throw and catch a ball while moving.

Materials: A light-colored wall. Chalk, measuring tape, stopwatch, and a standard inflated basketball.

Procedure: Four squares, 45 cm × 45 cm in size, are drawn on the left wall, 2.1 m high. All targets are marked 1.7 meters from the base of the wall and 60 centimeters apart. A boundary line is drawn parallel to the wall at a distance of 2.1 m.

The person is positioned behind the boundary line, with the ball placed behind him. At the signal "At your own pace!" or "At your own pace!" you must pass the ball to Target 1 and retrieve it, then pass it to Target 2 and repeat the action up to Target 4. The examinee must repeat the same process in reverse order, from Field IV to Field I. The examinee can only complete chest transitions. The test must last thirty seconds.

Points: Two points are awarded for each hit on the target within the square (including the lines). The final score is the number of points scored within this thirty-second period. Three tests are conducted. The test is the best of three.

Over-head Pass:

Purpose: To measure the accuracy of the player's shooting.

Material: The accuracy of the player's shooting is measured.

Procedure: The target consists of a series of rectangles of different sizes, one above the other. The telescope is marked with the length of the horizontal rectangle or hung on the wall. The rectangle is drawn so that the inner rectangle is 50 cm long and 25 cm wide, the outer rectangle is 101 cm long and 63 cm wide, and the outer rectangle is 152 cm long and 101 cm wide. The outer line is located 1.20 m. above the ground. An experimental animal performs ten trials from a distance of 4.2 meters using:

Points: 3 points for the inner rectangle and line, 2 points for the middle rectangle and line, 1 point for the outer rectangle and line. Three attempts are made and the best of the three attempts is considered the result.

Base Ball Pass Test

Purpose: This test is designed to accurately assess the player's ability to shoot targets from a distance.

Materials: Basketball, smooth wall, paint or chalk to mark the wall.

Procedure: The player stands 22 meters from the wall and makes six shots of the ball towards the target, which consists of three circles. The inner circle has a diameter of 50 cm, the second circle has a diameter of 95 cm, and the outer circle has a diameter of 1.40 m. The base of the outer circle is located fifty centimetres above the ground.

Points: The point values for the inner, middle, and outer circles are 3, 2, and 1, respectively. Any ball that touches the line earns the maximum point. There are three attempts, and the best of the three attempts counts as the test result.

Dribbling

Forward backward side shuffle dribble test

Purpose: The purpose of the test is to examine how a player holds the ball while attacking and dribbling.

Material: Basketball, stopwatch.

Procedure: The player stands at a designated point on the court. From this point, a four-meter line is drawn to the left, right, and forward. With the "I" sign, he dribbles with his right hand and comes back with the same hand, bouncing the ball without turning his body. After reaching the starting position, the ball moves to the left and laterally to the right. After reaching the end of the line, he moves the ball to the right and returns it to the starting position without changing his body position. He then dribbles with his left hand, moves forward, and dribbles with the same hand. After reaching the starting position, he moves the ball to the right and dribbles laterally to the left, then returns to the starting position dribbling with his left hand. Three experiments are proposed.

Points: The time required to complete the circuit is expressed in tenths of a second. Three experiments are proposed. The best of the three experiences constitutes the test score.

Zig zag dribble test

Purpose: The purpose of the test is to assess the speed dribble and control of ball with right and left hands between the obstacles.

Material: A basketball, stop watch, cones or chairs.

Procedure: Five chairs are placed in a straight line so that the first one is 15 feet apart from the starting line and others 10 feet apart. On the signal 'Go' the player with the ball dribbles in a zig-zag way by alternately changing to the right and left of the obstacles and circles the last obstacle and returns back to the starting line. He has to complete a total of three circuits

Scoring: The score is the time taken to finish the three circuits of zig-zag dribbling. Three trials are given. Best of three trials is recorded as the test score.

Speed dribble

Purpose: The purpose of test is to assess the speed dribble during full court transition

Material: A full size regulation court a basketball and watch

Procedure: On the signal "Ready... Go", the subject has to start dribbling from one End Line, go up to the center Line and return to the Start. The Subject continues the action by going upto the other End line and returns to the Finish

Scoring: Time taken to complete the course is recorded, as the score. Three trials are given. Test score is the best out of three trial scores.

Star dribble test

Purpose: the purpose of this test to check the agility of a player with dribbling

Material: a basketball, stop watch and a cone
Procedure :5 cone is placed in a painted area (rectangle area) in a star form. and player is to start the drill from centre cone.

Scoring: Time taken to complete the course is recorded, as the score. Three trials are given. Test score is the best out of three trial score

Shooting
4 corner full court shooting
Purpose:

Material: full size regulation Basketball court, stopwatch, measuring tape, chalk, cone and standard basketball.

Procedure: 4 cones are placed in each corner of 3-point arc. Subjects are asked to start with 3 point attempt from cone number 1 and after that he will receive a entry pass from outside from there he has to dribble the ball to the cone number 2 placed to the other corner of the court from there he has to attempt another 3 point shot, there again he receive a pass from outside , then he has to dribble the ball to cone number 3, from there again a 3 point shot , receive ball

from outside and dribble the ball to cone no. 4 again a 3 point arc, then receive ball from outside and dribble to cone no. 1 from where he started.

Scoring: for every successful shoot 2 point are awarded. Trial score is the number of points scored in a duration. Three trials are given. Test score is the best out of three trails

Inside outside circle shooting

Purpose:

Material: Half size regulation Basketball court, stopwatch, measuring tape, chalk, cone and standard basketball.

Procedure: From center of the rim, we will place 5 cones at the distance of 15 feet are placed in each five position and following these 5 cones are placed in 3-point arc line also in each position. the subject is made to stand with the ball inside the circle at right side from the center facing the rim. one the signal 'Ready...Go'. the subject start shooting from inside the circle and one by one at each cone ball are giving to him and he make shoot and after completing the inside circle subject start from outer circle and make 5 shoots from each position.

Scoring: for every successful shoot from inside the circle 1 point are awarded and from outside the circle 2 point are awarded. Trial score is the number of points scored in a duration. Three trials are given. Test score is the best out of three trails

Shooting endurance

Purpose:

Material: full size regulation Basketball court, stopwatch, measuring tape, chalk, cone and standard basketball.

Procedure: 5 cones are placed on 3-point arc in each position. and following these 6 cones are placed in a single line having 2-meter distance between the cones each from center point of 3-point arc extended to backcourt. The subject is made to stand with the ball at center point cone. On the signal 'Ready...Go' the subject starts shooting from center and after shooting it cover the cone placed behind the subject and receive a ball on another cone as per their convenience and again go over through that cone placed in a center line. subject shoot one by one in every position and cover all the cone kept in a center line.

Scoring: for every successful shoot, two point is awarded. Trial score is the number of points scored in a duration. Three trials are given. Test score is the best out of three trails.

Figure of eight layup shoot

Purpose: To measure the speed of layups by both teams in possession of the ball.

Materials: A small basketball court, a stopwatch, a tape measure, chalk, cones, and a regular basketball.

Procedure: The centre of the basket is marked on the floor. From the center, two straight lines, each 3.6 meters long, are drawn, intersecting the neutral zone of the free-throw lines. At these ends are two cones corresponding to points "A" (right side) and B (left side). The player is required to stand with the ball at point "A" behind the bench in front of the board. At the signal "Ready... go," the player begins dribbling with their right hand and shoots from above. If the subject misses, they can either take the rebound and go under the basket from the right side, or take the ball and dribble to point "B," dribble around the bench, and shoot with their left hand from the left side. The subject takes alternating shots for up to sixty seconds.

Points: Two points are awarded for each successful shot. One point is awarded for each ball that bounces under the basket. The test result is the number of points scored in one minute. Three tests are being prepared. The best of the three attempts is the proof.

Board Tap and Shoot

Purpose: To measure the ability to shoot and dribble the ball under the basket with the right and left hands.

Material: Full-size basketball court, stopwatch, and regular basketballs.

Procedure: The subject is asked to position themselves with the ball under the basket, to the left or right of the backboard. At the signal "Ready... Go!" » The subject can capture the reflected light and then take the photo. On the right side of the court, you must bounce the ball with your right hand and then shoot. Similarly, on the left side, you must use only your left hand to kick and shoot. Only after turning the basket to one side may you switch to the other side for the next attempt. The period begins with the "Out" signal, and after thirty seconds, play is interrupted by a short whistle.

Scoring: One point is awarded for each basket made. The benchmark is the number of baskets scored in thirty seconds. Three attempts are allowed. The test point is the best of the three test points.

Hook Shot

Purpose: To measure a high-level player's ability to shoot from beyond the line.

Materials: A half-size basketball court, a stopwatch, two chairs, and regular basketballs.

Procedure: The center of the basket is marked on the floor. Two straight lines 1.8 meters long are drawn from the center, intersecting the neutral zone at the free-throw lines. Two chairs are placed at these ends, corresponding to points "A" (right side) and B (left side). The candidate is required to stand behind a chair in front of a chessboard with the ball at point "A." At the signal "Ready... go," the candidate begins the throw with their right hand and attempts another throw with their left hand from point "B." The candidate performs alternating hook shots.

Scoring: One point is awarded for each basket made. The test is the number of baskets scored in ten attempts. Three attempts are allowed. The test result is the best of three results obtained in three attempts.

STATISTICAL TECHNIQUES USE FOR THE STUDY

Reliability Estimates

Intraclass Reliability for the internal consistency of the three subject tests, determined using a repeated-measures ANOVA model.

Objectivity coefficient

The objectivity of the tested item is verified using the intraclass coefficient of the two-way ANOVA model. (Saffrit & Wood, 1989)

Validity

Pearson's product-significance correlation was used to assess the validity of the test items.

Norms

The percentile was used to construct the rules for the final set of test items. (Hasted & Lacey, 1994)